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Notes on Some Southwestern Plants

By T. D. A. COCKERELL

Kallstroemia grandiflora *Arizona* n. var.

On October 9, 1899, I observed that the plants of *K. grandiflora*, growing abundantly by the roadside and in waste places at Phoenix, Arizona, were easily separable into two forms, one of them the genuine *grandiflora*, the other undescribed. I tabulated the characters thus :

K. GRANDIFLORA

Flower 30 mm. in diam. (*i. e.*,
the cup of the living flower).
Pistil 9 mm. long.

Sepals 12 mm.

Peduncles 34-43 mm.

Leaves rather paler : leaflets
longer in proportion to breadth,
second pair 8-10.5 mm. long, broad.
3-3.5 broad.

Beak of fruit much longer (10
mm.) and not so thick.

Arizona n. var.

Flower 20 mm. in diam.

Pistil shorter, 6 mm. and
stouter in proportion to its
length. Filaments shorter.

Sepals 8 mm.

Peduncles 14-22 mm.

Leaves rather darker : leaflets
(second pair) 6-8 mm. long, 3-4
broad.

Beak of fruit shorter (8 mm.)
and stouter.

My first opinion was that these were clearly distinct species, but without being able to prove one thing or the other, I now incline to the opinion that *Arizona* should be considered a variety or dimorphic form of *grandiflora*.

HOLACANTHA EMORYI Gray

At Buckeye, Arizona, in October, I found a plant growing close to a ditch, and, apparently as the result of the unusual moisture, putting forth numerous narrow leaves, 15 mm. long. Dr. B. L. Robinson tells me that Mr. Pringle also collected the plant in this condition.

Malvastrum dissectum (Nutt.)

Sida dissecta Nutt.; Torr. & Gray, Fl., i. p. 235.

At Las Vegas, N. M., I found *M. dissectum* growing commonly,

and at the same place plenty of *M. coccineum*, which is a very distinct plant. In Wet Mountain Valley, Colorado, *M. dissectum* was common, and passed for *M. coccineum*, which was not found there. In addition to the taller growth and very different leaves of *M. coccineum*, there is a difference in the lobes of the calyx, which in *dissectum* have short linear reddish tips, wanting in *coccineum*.

M. dissectum in the young state of the fruit has two ovules in each carpel, but one aborts, or not rarely both. Thus the distinction between *Malvastrum* and *Sphaeralcea* must rest not so much on the number of ovules as on their condition when mature: in the former genus closely adherent to the carpel wall, in the latter free and pubescent. It is unfortunate that the use of the name *dissectum* in a specific sense will interfere with the South African *M. dissectum* Harv.; in Harv. & Sond., Fl. Cap. 1: 164.

***Sphaeralcea lobata perpallida* n. var.**

Flowers very pale pinkish instead of scarlet. This occurs as a sport in the Mesilla Valley, N. M., but from Rincom, N. M., twenty miles or more northward along the railroad, it occurs abundantly to the exclusion of the type. *S. lobata* (typical form) occurs as high up as Las Vegas, N. M., in abundance. *S. cuspidata* (Gray) is common at the same place, and very distinct from *lobata*. The pollen of *cuspidata* is pale lemon-yellow, that of *lobata* bright orange.

PROSOPIS VELUTINA Wooton

I found this common throughout the Salt River Valley, Arizona, and at Buckeye. At the last mentioned place it grows to a tree of very fair size.

ROSA ARKANSANA SUFFULTA=*R. suffulta* Greene, Pittonia, 4: 12

I found this abundant at Las Vegas, between the town and the Hot Springs. The stipular leaflets are as described by Greene.

VERBENA MACDOUGALII Heller

This is extremely common at Las Vegas, N. M., and I had noticed that it did not agree with the description of *V. stricta*. The following bees were observed to visit its flowers at Las Vegas and the vicinity:

Anthophara (Amegilla) cardui Ckll., 1 ♂, Hot Springs, Aug. 10, W. Porter.

Anthophara (Amegilla) cleomis Ckll., 1 ♂, Las Vegas, July 20, W. Porter.

Anthophara maculifrons Cresson, 4 ♂, 2 ♀, Las Vegas, Aug. 9, W. Porter.

Calliopsis verbenae Ckll. & Porter, Several ♂, ♀, Las Vegas, Aug. 9, W. Porter.

Halictus tegularis Rob., 1 ♀, Hot Springs., Aug. 10, W. Porter.

Megachile fidelis Cresson, ♂, Las Vegas, July 6-19, Porter and Ckll.

Megachile fortis Cresson, 1 ♂, Hot Springs, Aug. 10, W. Porter.

Melissodes grindeliae Ckll., 1 ♀, Las Vegas, July 19, W. Porter.

Melissodes pallidicincta Ckll., 1 ♀, Las Vegas, July 6-11, M. Winters and Ckll.

Also two or three species of *Megachile* not yet determined.

DELPHINIUM CAMPORUM Greene, var.

Las Vegas, N. M., July 20, 1899 (*M. Winters* and *N. Stern*).

This plant seems not to agree wholly with the described forms : it is about three feet high, with tall spikes a foot long, with very numerous flowers : leaves with linear divisions. The flowers are glabrous, but with a lens one can see a short pubescence on the spurs and peduncles. Sepals greenish-white : lower petals violet, bearded with yellow hairs : upper petals white, outwardly stained at apex with purple, and lower with blue : anthers purplish : filaments ringed with deep blue just below the anthers.

UROMYCES COMPACTUS Peck (det. Ellis and Peck)

Mesilla, N. M., Nov. 1897. I found this abundantly on the stems of *Aster spinosus* : it was originally described as from an unknown composite.

MESILLA PARK, N. M., Dec. 15, 1899.